

Republic of Kenya

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KS 2435 (2012) (English): Blended Edible Oils -
Specification (Draft Standard)



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Blended Edible Oils – Specification

PUBLIC REVIEW DRAFT

DRAFT KENYA STANDARD

DKS 2435 2012

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The following organizations were represented on the Technical Committee:

University of Nairobi — Department of Food Science and Technology
Egerton University – Department of Human Nutrition
Jomo Kenyatta University of Science & Technology – Department of Food Science
Ministry of Public Health and Sanitation — Division of Food safety
— Division of Nutrition
Kenya Industrial Research and Development Institute (K.I.R.D.I)
Government Chemist Department
Kenyatta National Hospital
Consumer Information Network
Unilever Kenya Ltd.
Bidco Oil Refineries Ltd.
Kapa Oil Refineries Ltd.
Pwani Oils Refineries
Kenya Bureau of Standards — Secretariat

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Blended Edible Oils – Specification

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Foreword

This Draft Kenya Standard was developed by the Technical Committee on Edible Fats and Oils under the supervision of the Standards Projects Committee and is in accordance with the Procedures of the Bureau.

This standard is developed to provide for guidance on the minimum quality requirements of blended edible oils and ensure proper labeling of the final products to avoid deceptive labeling practices. It is expected that this standard will provide for innovation within the sector while providing improved products without misleading the consumers. Emphasis on this standard therefore is placed on the labeling of the final product.

During the preparation and revision of this standard reference made to the following documents:

KS 326 – 2: Edible oils and Fat, Part 2 – Vegetable and Animal Fat Specification;

CODEX STAN 19 1981 Rev. 2009: Codex Standard for named fats and oils not covered by individual standards

CODEX STAN 210: 1999 Rev. 2011: Codex Standard for named vegetable Oils;

PS 2858:2003: Pakistan Standard on the Specification for Blended Cooking Oil; and

Pearson's composition and analysis of foods (Ninth Edition).

Acknowledgement is hereby made for the assistance derived from these sources.

Blended Edible Oils - Specification

1 Scope

This draft Kenya standard specifies the requirements for blended edible oils from botanical origins processed for human consumption.

2 Normative references

KS 327 *Method of sampling and test for edible fats and oils*

KS 1500 *Code of hygienic practice for food and drinks manufacturing industry*

KS EAS 38 *labeling of prepackaged foods*

KS ISO 660 *Animal and Vegetable fats – Determination of acid value and acidity*

KS ISO 662 *Animal and vegetable fats and oils — Determination of moisture and volatile matter content*

KS ISO 663 *Animal and vegetable fats and oils — Determination of insoluble impurity contents*

KS ISO 3960 *Animal and Vegetable fats and oils – Determination of peroxide value*

KS ISO 5555 *Animal and vegetable fats and oils — sampling*

KS CAC/GL 23-1997, *Guidelines for use of nutrition claims*

3 Definitions

For the purposes of this standard, the following definitions shall apply:

3.1

Blended edible oil

a mixture of refined, bleached and deodorized edible oil grades of vegetable origin fit for human consumption. Virgin oils that have been proven to be safe for direct human consumption may be included in the blend without being refined

3.2

Fortified blended edible oil

a blended edible oil to which at least vitamin A has been added in compliance to this standard

3.3

Fortification Logo

a symbol awarded by KEBS on behalf of Ministry of Public Health and Sanitation for fortified products that have demonstrated compliance to the provisions of fortification in the respective Kenya standards.

4 Quality requirements

4.1 General requirements

4.1.1 Blended edible oils shall be free from foreign matter and other impurities

4.1.2 The colour of the product shall be characteristic of the designated oil blend

4.1.3 The products shall be free from rancid odour and taste

4.2 Quality requirements and compositional requirements

4.2.1 A product qualifies to be blended edible oil when the minimum oil in the blend is 10% of the total volume

4.2.2 The blended oil shall comply with the quality requirements in Table 1.

Table 1 — Quality requirements for Blended edible oil

SL No	Characteristic	Requirement	Test method
i)	Matter Volatile matter at 105 °C, m/m, Max	0.2	K S ISO 662
ii)	Insoluble impurities, %, m/m, Max	0.05	KS ISO 663
iii)	Soap Content, %, m/m, Max.	0.005	KS 327
iv)	Acid value, (mg/KOH/g (max.))	0.6	KS ISO 660
v)	Free fatty acid, % (max.), as oleic	0.25	KS 327
vi)	Peroxide value, (mEq oxygen/kg (max.))	10	KS ISO 3960
vii)	Iron (Fe) mg/kg, max.	2.5	KS 327
viii)	Copper, mg/kg, max.	0.1	KS 327
ix)	Colour, 133.35 mm (5¼ in.) Lovibond, max.	R 6	KS 327
x)	Allyl Isothiocyanate	Absent	KS 327

5 Food additives

5.1 Food Additives shall not be used blended virgin or cold pressed oils. In other forms the additives may be used subject to tables 2, 3, 4 and 5.

5.2 Colours

The colours provided in table 2 below are permitted for use within the stated maximum use level for the purpose of restoring natural colour lost in processing or for the purpose of standardizing colour but not for the purposes of concealing damage or inferiority or making the product appear to be of greater than actual value

Table 2 – permitted colours in blended oils

INS ^a No.	Colour	Maximum Limit
100(i)	Curcumin	5 mg/kg
160a(ii)	Beta-carotenes (Vegetable)	25 mg/kg
160a(i)	Beta Carotene (Synthetic)	25 mg/kg (singly or in combination)
160a(iii)	Beta Carotene (Blakeslea trispora)	
160e	Beta-apo-8'-carotenal	
160f	Beta-apo-8' carotenoic acid, methyl or ethyl ester	
160b(i)	Annatto extracts, bixin-based	10 mg/kg (as bixin)

^a INS means International Numbering System as published by Codex

5.3 Antioxidants

Table 3 - Antioxidants

INS No.	Antioxidant	Maximum Limit
304	Ascorbyl Palmitate	500 mg/kg (Singly or in combination)
305	Ascorbyl Stearate	
307a	Tocopherol, d- <i>alpha</i> -	300 mg/kg (Singly or in combination)
307b	Tocopherol concentrate, mixed	
307c	Tocopherol, dl- <i>alpha</i>	
310	Propyl gallate	100 mg/kg
319	Tertiary butyl hydroquinone (TBHQ)	120 mg/kg
320	Butylated hydroxyanisole (BHA)	175 mg/kg
321	Butylated hydroxytoluene (BHT)	75 mg/kg

Any combination of gallates, BHA, BHT, and/or TBHQ		200 mg/kg but limits above not to be exceeded
389	Dilauryl thiodipropionate	200 mg/kg

5.4 Antioxidant synergists

Table 4 – Antioxidant Synergists

INS No.	Antioxidant synergist	Maximum Limit
330	Citric acid	GMP
331(i)	Sodium dihydrogen citrate	
331(iii)	Trisodium citrate	
384	Isopropyl citrates	100 mg/kg (Singly or in combination)
472c	Citric and fatty acid esters of glycerol	

5.5 Antifoaming agents (deep frying oil)

Table 5 – Antifoaming agent

INS No.	Antifoaming agent	Maximum Limit
900a	Polydimethylsiloxane	10 mg/kg

6 Vitamin A fortification

6.1 The fortificants shall be protected with antioxidants to ensure maintenance of the vitamin stability within the shelf life of the product and shall ensure the final product meets and maintains the levels provided in this standard.

6.3 The recommended forms of vitamin A for fortification shall be Retinyl acetate, Retinyl palmitates or pro-vitamin A (β -carotene).

6.4 The blended oils shall be fortified within the range of 10 mg/kg — 20 mg/kg as retinol.

7 Contaminants

7.1 Blended oils shall not have deleterious substances in amounts harmful to health. The limits shall comply with those specified in Table 6 when in accordance with KS 327.

Table 6 — Heavy metal contaminants limits in vegetable fats and oils

SL No	Contaminant	Max. Limit
i)	Lead (as Pb) mg/kg	0.1
ii)	Arsenic (as As) mg/kg	0.1

8 Hygiene

8.1 vegetable fats and oils shall be prepared and packaged in premises built and maintained under hygienic condition in accordance with Public Health Act, Cap. 242, Food, Drugs and Chemicals Substances Act, Cap. 254 of the Laws of Kenya and KS 05-1500.

8.2 The product shall not contain any pathogenic microorganism or their derivatives to levels injurious to health.

9 Packaging

9.1 The product shall be packaged in food grade containers which shall maintain the hygienic, quality and safety parameters specified in this standard during the shelf life of the product.

9.2 The fill of the container shall be in accordance to the regulations under the Weights and Measures Act Cap. 513 of the Laws of Kenya.

10 Labelling

10.2 General labeling requirements

Labelling of vegetable fats and oils shall be done in accordance with KS EAS 38. In addition the following shall be shown:

a) Name of the product.

The dominant oil shall appear first in the label for example '*palm-olive blended oil*' or *Blended Oil (palm-olive blend)* or *Palm blend* where in the second example the bracketed description shall be in close proximity to the term blended oil and in this example palm oil is dominant oil in the product;

b) the name, address and physical location of the manufacturer/distributor;

c) country of origin in the case of import;

d) net weight;

e) list of ingredients, in descending order of proportion;

f) fortified oils shall have a declaration, 'FORTIFIED OR ENRICHED WITH VITAMIN A' or have the fortification logo and in either case the level of fortification shall be in compliance to this standard;

g) nutrition information;

h) manufacturing date;

i) expiry date;

j) storage conditions;

k) batch/lot number.

10.1 Health and Nutrition claim

Any health and nutrition claim attached to blended oil shall be in accordance with KS CAC/GL 23-1997, *Guidelines for use of nutrition claims*

11 Sampling

11.1 Any package/container drawn at random from a lot or batch shall constitute a representative sample of that lot or batch.

11.2 Sampling of fortified and non fortified vegetable fats and oils shall be done in accordance with KS ISO 5555.

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